

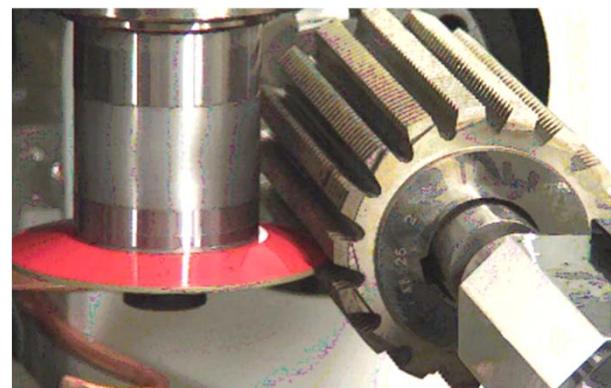
Gear Hob resharpening (HSS)

A12-010

Gear Hobs can be sharpened in many ways using different grinding wheels and sharpening technologies.

SCHNEEBERGER provides a number of possible solutions, based on more than 15 years experience in gear hob grinding technology. The given example was ground using a single cup form CBN wheel and box grinding cycle. Usual material removal rate hereby is about 0.2mm.

For stiffer or coated materials, a usage of roughing and finishing wheel might be necessary and highly recommended. Usage of faster traverse rates can be considered in association to the processed gear hob material.



1. Cycletime for sharpening

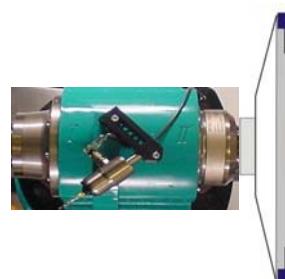
Tool specifications					
Diameter 100 mm, Z 22, Length 300 mm, Non-spiral Material HSS s390					
Operations	Tasten	Abrichten	Schärfen	Schruppen	Fertigschleifen
Feed [mm/min]	2000	400	200	1500	2000
Infeed / cycle [mm]		0.005	1.000	0.075	0 - 0.005
Wheel speed [m/s]		33	33	33	33
Used wheels		6A2	6A2	6A2	6A2
Grinding time [min]	0.5	1.0	1.0	48.0	7.0
Total cycle time	~ 57.5 min				

The mentioned cycle times are indicative. The material to be ground, different grinding wheels or other coolants can influence the cycle times considerably.

Roughing=6x0.075mm+1x0.05mm
Finishing = 2x0 max. 2x0.005mm
Total removal = 0.5mm

2. Used Grinding Wheels

6A2 / 12C9 90° CBN Ø175 B91



3. Machine and Software Requirements

Maschines: 5 axes CNC grinder: Gemini DMR / Corvus GDS
CNC Control: Fanuc 31i
Coolant: Synthetic oil, pressure 6 bar
Software: Quinto 5

Responsible Engineer: SIW, 03.2010

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